



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/658,139

09/09/2003

Ed H. Frank

14182US02

3006

23446 7590 10/21/2008  
MCANDREWS HELD & MALLOY, LTD  
500 WEST MADISON STREET  
SUITE 3400  
CHICAGO, IL 60661

EXAMINER

HOANG, HIEU T

ART UNIT

PAPER NUMBER

2452

MAIL DATE

DELIVERY MODE

10/21/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/658,139  
Filing Date: September 09, 2003  
Appellant(s): FRANK ET AL.

\_\_\_\_\_  
Ognyan Beremski, Reg. No. 51,458  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 09/02/2008 appealing from the Office action mailed 04/03/2008, followed by the Advisory Action mailed on 05/19/2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct. The amendment after final rejection filed on 05/05/2008 has been entered.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**WITHDRAWN REJECTIONS**

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. The 101 rejection is hereto withdrawn.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,587,680	Ala-Laurila et al.	11/1999
6,651,105	Bhagwat et al.	11-1999

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

1. Claims 1-7, 9-17, 19-27, and 29-31 are rejected under 35 U.S.C. 102(e) as being by Ala-Laurila et al. (US 6,587,680, hereafter Laurila).
2. For claim 1, Laurila discloses a method for providing seamless connectivity and communication in a multi-band, multi-protocol network (abstract), the method comprising:
  - initially authenticating an access device upon said access device initiating communication with a first access point (fig. 3, col. 8 lines 62-67, AP\_old 14 or the old access point that mobile terminal 12 is originally communicating and about to disconnect to hand-over to a new access point, or AP\_new 114; SA or security association, read as authentication information, is retrieved from AP\_old,

Art Unit: 2452

suggesting that AP\_old has stored authentication information of mobile terminal 12 for the original communication);

- providing authentication information related to said initial authentication to at least one of a second access point and a third access point (fig. 3, HO\_request, a handover request containing authentication information is sent from AP\_old to AP\_new); and
- servicing said access device by one of said first access point, said second access point and said third access point based on said initial authentication (fig. 3, payload traffic or servicing can be resumed between the mobile terminal and the new AP).

3. For claims 11 and 21, the claims are rejected for the same rationale as in claim 1.

4. For claims 2, 12, and 22, Laurila further discloses storing said initial authentication information (fig. 3, AP\_old has stored the authentication information of terminal 12 for the original communication).

5. For claims 3, 13, and 23, Laurila further discloses retrieving said stored initial authentication information by said second access point and said third access point (fig. 3, HO\_request, a handover request containing authentication information of device 12 is sent from AP\_old to AP\_new).

6. For claims 4, 14, and 24, Laurila further discloses said retrieving comprises retrieving said initial authentication information by said second access point when said access device migrates from a first coverage area associated with said first access point to a second coverage area associated with said second access point (fig. 3, a handover is when the mobile terminal migrates from a first coverage area of AP\_old to a second coverage area of AP\_new).

7. For claims 5, 15, and 25, the claims are rejected for the same rationale as in claim 4. A handover to a third access point is the same as the handover from the old access point to the new access point.

8. For claims 6, 16, and 26, Laurila further discloses said retrieving comprises retrieving said initial authentication information upon said access device initiating communication with said second access point (fig. 2, radio handover, HO\_request, HO\_response(SA,SA), the new access point retrieves the initial authentication information of the mobile terminal previously stored at the old access point upon the device initiating communication with the new access point).

9. For claims 7, 17, and 27, the claims are rejected for the same rationale as in claim 6.

Art Unit: 2452

10. For claims 9, 19, and 29, Laurila further discloses transparently transferring said initial authentication information to said second access point during a handoff of said access device from said first access point to said second access point (fig. 2, HO\_request, HO\_response, fig. 3, HO\_response, transferring authentication information from the old access point to the new access point during a handover between the two).

11. For claims 10, 20, and 30, the claims are rejected for the same rationale as in claim 9.

12. For claim 31, Laurila further discloses said at least one processor is an authentication processor, a switch processor, an access point processor and a server processor (fig. 2, AP\_old, AP\_new are specialized computers having processors).

***Claim Rejections - 35 USC § 103***

13. Claims 8, 18, and 28 rejected under 35 U.S.C. 103(a) as being unpatentable over Laurila, as applied to claims 1, 11, and 21, in view of Bhagwat et al. (US 6,651,105, hereafter Bhagwat)

14. For claims 8, 18, and 28, Laurila discloses the invention substantially as in claims 1, 11, and 21. Laurila does not disclose distributing said initial authentication information to said second access point and said third access point upon said initial authenticating.

However, Bhagwat discloses distributing said initial authentication information to said second access point and said third access point upon said initial authenticating (fig. 5, authentication server, col. 7 lines 34-42, col. 10 lines 14-34, a centralized authentication server stores authentication information of mobile devices as they move from one access point to the next)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Laurila and Bhagwat to implement a centralized authentication server for distributing authentication information in a dynamic fashion among PPP backend servers and further access points (Bhagwat, col. 10 lines 22-26).

#### **(10) Response to Argument**

##### **<35 U.S.C 101 rejection>**

The previous U.S.C 101 rejection of claims 11-20 is withdrawn.

##### **<35 U.S.C 102 rejection>**

Applicant argues that Laurila's security associations (SAs) are not related to initial authentication of a mobile device with a first access point. The examiner respectfully disagrees. Laurila clearly discloses security associations are authentication keys used in initial authentication of the mobile device with the first access point (AP) (old AP before the handover) (col. 8 lines 17-20, fig. 2, col. 5 lines 43-50, *AP old 14 and mobile terminal 12 have authentication keys or SAs*).



Furthermore, the claims (such as claim 1) recite “authentication information related to said initial authentication.” Therefore, security associations or authentication keys can be read as authentication information related to said initial authentication.

Applicant argues that Laurila must require new authentication at each new access point. The examiner respectfully disagrees. This argument is irrelevant to the claimed subject matter. The claim language makes no distinction between whether new access point have to or does not have to authenticate the mobile device, and/or whether more processing is done to the initial authentication information or not before servicing the device. The claim merely recites “servicing said access device by one of said first access point, said second access point and said third access point based on said initial authentication.” The fact is that Laurila’s method/system for transferring SAs from an old AP to a new AP upon handover before servicing the mobile terminal can be resumed at the new AP (see e.g. fig. 2, 3, *transferring of SAs before payload traffic can be resumed*).

Applicant further argues that the prior art does not disclose storing said initial authentication information. The examiner respectfully disagrees. Laurila does disclose storing said initial authentication information (fig. 2, 3, *SA parameters are retrieved from the security association data base*)

Applicant further argues that the prior art does not disclose retrieving the authentication information by the second and third access points. The examiner respectfully disagrees. Laurila discloses one new AP in the figures for the sake of

Art Unit: 2452

brevity (fig. 2, 3, *one AP new*). However, more than one new APs can be applied using the same principle (col. 6 lines 41-44, fig. 1, item 38, *a list of available new APs that the device can handover to*). Furthermore, the claim makes no distinction between the second and third AP. Therefore, any two APs in the list 38 can satisfy second and third APs. Therefore, it is maintained that Laurila does teach retrieving the authentication information by the second and third access points (fig. 2, *SAs are retrieved by AP new using a request*, fig. 1, *list 38 of new APs function the same way as AP new* in fig. 2)

Based on the same rationale, it is maintained (for arguments related to e.g. claim 4) that Laurila does disclose retrieving said initial authentication information by said second access point when said access device migrates from a first coverage area associated with said first access point to a second coverage area associated with said second access point (fig. 2, 3, *a handover is when the mobile terminal migrates from a first coverage area of AP\_old to a second coverage area of AP\_new*, see col. 6 lines 52-65, col. 7 lines 46-55, *changing of coverage areas when handover occurs*). It is also maintained (for arguments related to e.g. claim 5) that handover from a first AP to a third AP is no difference than handover from a first AP to a second AP.

Applicant further argues that the prior art does not disclose transparently transferring said initial authentication information to said second access point during a handoff of said access device from said first access point to said second access point. The examiner respectfully disagrees. "Transparently transferring" means that the transferring process is done automatically without the user knowing about it. The fact

Art Unit: 2452

that Laurila method/system of automatic transferring of SAs from AP old to AP new in a transparent manner to the user that the user does not realize the transferring is enough to say that Laurila discloses transparently transferring said initial authentication information to said second access point during a handoff of said access device from said first access point to said second access point (fig. 2, HO\_request, HO\_response, fig. 3, HO\_response, fig. 4A, steps 406-408, col. 9 lines 57-64, *transferring authentication information SAs from the old access point to the new access point is done automatically during a handover between the two APs and is therefore transparent to the user*, also see col. 7 lines 46-55, *handover is triggered automatically and not by a user request*; col. 8 lines 3-11, *very fast transferring of SAs from old AP to new AP* )

**<35 U.S.C 103 rejection>**

Applicant argues that the prior art Laurila and Bhagwat do not disclose distributing said initial authentication information to said second access point and said third access point upon said initial authenticating. The examiner respectfully disagrees.

Bhagwat discloses distributing said initial authentication information to said second access point and said third access point upon said initial authenticating (fig. 5, a centralized authentication server, col. 7 lines 34-42, col. 10 lines 14-34, *a centralized authentication server stores authentication information of a mobile device so that all backend servers (with associated access points) can retrieve the authentication information as the mobile device moves from one access point to the next*)

Art Unit: 2452

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Laurila and Bhagwat to implement a centralized authentication server for distributing authentication information upon initial authentication in a dynamic fashion among PPP backend servers and associated access points (Bhagwat, col. 10 lines 22-26).

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Art Unit: 2452

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/HH/

Hieu Hoang

Patent Examiner

Art Unit 2452

Oct 14, 2008

Conferees:

/Kenny S Lin/

Primary Examiner, Art Unit 2452

/Bunjob Jaroenchonwanit/

Supervisory Patent Examiner, Art Unit 2456